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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/752,616	12/28/2000	Michel Bruno	CH919990030US1	9446

7590 10/04/2002

Robert M. Trepp  
IBM CORPORATION  
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P.O. Box 218  
Yorktown Heights, NY 10598

EXAMINER

CONE, DARIUS N

ART UNIT	PAPER NUMBER
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2854

DATE MAILED: 10/04/2002

8

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/752,616

Applicant(s)

BRUNO ET AL.

Examiner

Darius N. Cone

Art Unit

2854

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☒ Claim(s) 28 and 29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☒ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Europe on 12/31/1999. It is noted, however, that applicant has not filed a certified copy of the EPO 99126245.2 application as required by 35 U.S.C. 119(b).

### ***Claim Objections***

2. Claims 1, 2, 14, 15, 22-27 are objected to because of the following informalities: In claims 1, 2, 14 and 15, the language "it's" in each of the claims is improper, "its" preferable.

In claim 22, line 2, "comprising should be --comprises--.

In claim 27, there is no antecedent basis for "said key elements" and "the hard support posts." Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 11-15 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to

make and/or use the invention. There is no clear explanation of how to enable the force transducer zone in relation to the stamp device.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

6. Claims 7-10, 12-14, 16, 17 and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 7, the phrase "preferably" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claims 12-14, 16 and 17 generally narrative and indefinite. It is not clear as to where and how the "force transducer zone," is provided. Specifically, it is not clear how an area free of structures can have "additional structure. Since the metes and bound of claims 12-14, 16 and 17 cannot reasonably be determined, prior art cannot be applied to the claims at present.

Regarding claims 8, 9, 10, 13, 14, 16 and 17 the phrase "like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

In claim 27, the parenthesis renders the claim indefinite since it is not clear whether the limitation in the parenthesis is part of the claimed invention.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 2, 4, 5, 11, 15, 18, 19, 22-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Biebuyck et al. (US pat # 5,817,242).

With respect to claims 1 and 2, Biebuyck et al. teach a stamp device for printing a pattern on a surface of a substrate, comprising a carrier layer 17 provided on it's first side, a patterned material 12 combined with a second side made of a soft material 14, softer than the first material. The carrier layer is rigid 17 and is flexible in a direction perpendicular to an x-y plane (see Fig. 1E).

With respect to claims 4 and 5, Biebuyck et al. '242 teach carrier layer 17, made of indium tin oxide (ITO), an electrically conductive material, which can be chosen from a group consisting of a metal foil. Biebuyck et al. also teach a stamp device provided with structures in the patterned layer 12, having structure depths smaller than the thickness of the soft layer 14 (see Fig. 1E).

With respect to claim 11 and 15, since applicant has not claimed any structure of the zone, any portion of the patterned material 12 can be considered to be a "force transducer zone." For example, the spaces between the raised portions can be force transducer zones, which are suitable to meet the structures of claim 11, or the force transducer zone can be at the periphery of the patterned material.

With respect to claims 18 and 19, Biebuyck et al. teach patterned layer 12 provided with patterned structures for printing separated from each other by areas free of structures, where the first material of the patterned layer is at least partially omitted forming a recess (see col. 4, lines 34-25).

With respect to claim 22-27, Biebuyck et al. '242 teach self aligning means, Fig. 3 for an accurate relative positioning during the printing process, comprising lock elements 301 and key elements 311, which can be made from PMMA, having tapered flanks, being arranged in rows, where the patterned layer comprises the key elements 301 and the substrate comprises the lock elements 311. (see col. 2, lines 54-59 and col. 4, lines 14-25, Fig. 3)

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 8-10, 20, 21 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biebuyck et al. (US pat # 5,817,242) in view of Biebuyck et al. (US pat #5,925,259).

With respect to claims 8-10, Biebuyck et al. 242' teach all that is claimed as discussed above in the rejection of claims 1, 2, 4, 5, 11, 15, 18, 19, 22-27 except for a press means, which can be a roller element like a cylindrical press element for contacting the surface of the substrate. Biebuyck et al. 259' teach master roller 95 surrounded by four color roller 941-944 for color contact printing. It would be obvious to one ordinary skilled in the art to provide a stamp which should not be restricted to a basically flat form and may take other shapes, such as rollers or half-spheres for contact printing (see col. Col. 3, lines 1-4 and Fig 9).

With respect to claims 20 and 21, Biebuyck et al. 242' teach all that is claimed as discussed above in the rejection of claims 1, 2, 4, 5, 11, 15, 18, 19, 22-27 except for at least two passage channels, one inflow and the other outflow for a fluid or gaseous media, where at least two layers of the fluidic or gas network are stacked on top of each other. Biebuyck et al. 259' teach mask 51 provided with openings 511 for direct passage of vapor or plasma that makes conformal contact with the underlying stamp. It would be obvious to one ordinary skilled in the art to control the inflow and exit of vapor or fluid providing a method to control a stamp design where the recesses are formed with varying filling levels or with varying depth (see Fig. 6A).



With respect to claim 30, Biebuyck et al. 242' teach all that is claimed as discussed above in the rejection of claims 1, 2, 4, 5, 11, 15, 18, 19, 22-27 except for pressurizing through at least one passage channel the areas free of structure to prevent those areas from sagging and contacting the substrate by applying a load onto the stamp device. Biebuyck et al. 259' teach a method where well, trenches, recesses or the like are filled with reactants 44. It would be obvious to one ordinary skilled in the art to fill the open or recessed areas of the stamp to control stamp design and improve resolution.

11. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biebuyck et al. (US pat # 5,817,242).

With respect to claim 6, Biebuyck et al. teach all that is claimed except for the patterned layer being of thickness greater than the structured depths of the patterned layer. However, it would be obvious to one ordinary skilled in the art to modify Biebuyck et al. to have this feature since such is well known in the art as shown by applicant's admitted prior art.

With respect to claim 7, Biebuyck et al. teach that the load of compression of the elastic layer 14 made of a softer material is less than the patterned layer 12 made of a harder brittle material, making it obvious to one ordinary skilled in the art to provide the patterned layer with a higher compression ratio to easily absorb a specific ink, while accurately preserving the patterned features after repetitive application.

***Allowable Subject Matter***

12. Claims 28 and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

13. Applicant's arguments filed 6-13-2002 have been fully considered but they are not persuasive. Applicant's arguments centers around the patent to Biebuyck et al. '242, which the applicant believes does not teach the claimed structure of a rigid two-sided carrier layer provided in a stamp device. Applicant points out that the Examiner has suggested structure as taught by Biebuyck et al. '242 in Figs. 1A-1C, which may be in error and do not teach the claimed invention, Examiner agrees. Applicant also argues that the reference to Biebuyck et al. '242 entirely does not disclose the claimed invention, the Examiner disagrees. The Examiner initially was in error by referring to incorrect structure of the stamp device provided in '242, but still believes the patent to disclose the claimed invention. The Examiner has reapplied the correct structure, figure numbers and the like, suggesting Biebuyck et al. '242 disclose all of the structure provided in independent claims 1 and 2. The patent to Biebuyck et al. '259 was used as a secondary reference to disclose the teachings of a press means for contacting the patterned layer onto the surface of a substrate, where the press means does not have

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to be limited to just a handle, but can take on other shapes, such as rollers or half-spheres.

**Conclusion**

14. The references to Collier (US pat # 5,410,962), Shanbaum et al. (US pat # 6,223,655 B1) and Wasylczuk et al. (US pat # 5,655,451) disclose the teachings of stamp device provided with three layers of material needed for producing a design on a substrate.

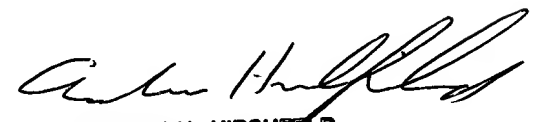
15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Darius N. Cone whose telephone number is (703) 308-1061. The examiner can normally be reached on 9am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (703) 305-6619. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-0725 for regular communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

DNC

October 1, 2002

  
ANDREW H. HIRSHFELD  
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